

CLAIMS

1. Peptides characterized in the general structural formula:



or pharmaceutically acceptable salts, or ethers, or amides thereof,
wherein X_1 is absent or comprises no less than 1 amino acid,
 X_2 is absent or comprises no less than 1 aminoacid.

2. The peptide of claim 1, comprising up to 30 aminoacid residues, preferably 5- 15 aminoacid residues.

3. The peptide of claim 1, wherein X_1 is selected from the group consisting of 0 aminoacid, His-Gly-Val-Ser-Gly-, His-Gly-Gly-Gly-, His-Val-Gly-Gly-, His-Gly-Gly-Gly-Gly, Gln-Gly-Gly-Gly-Gly and His-Gly-Gly-Gly-.

4. The peptide of claim 1, wherein X_2 is selected from the group consisting of 0 aminoacid, -His-Gly-Thr-His-Gly-, -Gly-Gly-Thr-His-Gly-, -Pro-His-Val-Gly-Gly-, -Pro-His-Gly-Gly-Gly-, -Pro-His-Gly-Gly-Trp-Gly-, -Gly-Gly-Gly-Thr-His-Ser.

5. The peptide of claim 1 selected from the group consisting of His-Gly-Val-Ser-Gly-Trp-Gly-Gln-His-Gly-Thr-His-Gly, His-Gly-Gly-Gly-Trp-Gly-Gln-Pro-His-Gly-Gly-Gly, His-Gly-Gly-Gly-Trp-Gly-Gln-Gly-Gly-Thr-His-Gly, His-Gly-Gly-Gly-Trp-Gly-Gln-Pro-His-Val-Gly-Gly, His-Val-Gly-Gly-Trp-Gly-Gln-Pro-His-Gly-Gly-Gly, Gln-Gly-Gly-Gly-Trp-Gly-Gln-Pro-His-Gly-Gly-Trp-Gly, His-Gly-Gly-Gly-Trp-Gly-Gln-Pro-His-Gly-Gly-Trp-Gly, His-Gly-Gly-Gly-Trp-Gly-Gln-Gly-Gly-Gly-Thr-His-Ser.

6. Proteins and polypeptides comprising aminoacid sequences of claim 1.

7. The peptides of claim 1, having antiproliferative and cytotoxic activity.

8. The peptides of claim 1, having antitumoral activity.

9. The peptides of claim 1, having antiviral activity.

10. The peptides of claim 1, having immunomodulating activity.
11. The proteins and polypeptides of claim 6, having antitumoral activity
12. The proteins and polypeptides of claim 6, having antiviral activity
13. The proteins and polypeptides of claim 6, having immunomodulatory activity
14. Chemical compounds being not natural peptides or proteins, having anti-proliferative, cytotoxic, antitumoral or antiviral activity, comprising the aminoacid sequence as defined in claim 1.
15. Pharmaceutical compositions including the peptides of claim 1.
16. Pharmaceutical compositions including the proteins and polypeptides of claim 1.
17. Pharmaceutical compositions including the chemical compounds of claim 14.
18. A nucleotide sequence coding any one of the peptides of claim 1.
19. A vector suitable for the expression of any one of the peptides of claim 1 in a host cell which expresses said peptide after transformation, including a DNA fragment coding the peptide of any of claim 1.
20. A host cell transformed by the vector of claim 20.